

Application No.: 10/810,491

Docket No.: 20154/0201085-USO

PENDING CLAIMS**Listing of Claims**

Claim 1 (previously presented): A method for manufacturing a sintered object, comprising:
press-forming a raw material powder to obtain a green compact;
placing the green compact on a sintering plate; and
sintering the green compact,

wherein a difference between a shape and dimension of the green compact and a shape and dimension of a desired sintered object is gradually decreased in a predetermined direction; and
wherein the green compact is placed on the sintering plate so that the predetermined direction is oriented substantially toward an outer circumference of the sintering plate in plan view.

Claim 2 (canceled).

Claim 3 (previously presented): The method for manufacturing a sintered object, comprising:

press-forming a raw material powder to obtain a green compact;
placing the green compact on a sintering plate; and
sintering the green compact,

wherein the green compact is press-formed so that the density of the green compact made of the raw material powder is gradually decreased in a predetermined direction,

wherein the green compact is placed on the sintering plate so that the predetermined direction is oriented substantially toward an outer circumference of the sintering plate in plan view.

Claim 4 (previously presented): The method according to Claim 3,

{W:\20154\0201085us0\005233\18.DOC (10/29/2005 12:03:22 PM) } 2

BEST AVAILABLE COPY

Application No.: 10/810,491

Docket No.: 20154/0201085-US0

wherein when the green compact is press-formed by filling a raw material powder into a cavity formed in a die, a quantity of the raw material powder filled into the cavity is controlled in the predetermined direction of the green compact after the press forming.

Claim 5 (previously presented): The method according to Claim 4, further comprising:
providing a lower punch in the cavity having an opening in the top face of the die to move vertically relative to the die; and
providing a raw material powder feed box above the top face of the die to move across the top face, whereby, when the raw material powder feed box is moving on the opening of the cavity, the raw material powder is supplied from the raw material powder feed box and filled into the cavity while the lower punch is vertically moved so that the filling quantity of the raw material powder is controlled in the predetermined direction.

Claim 6 (previously presented): The method according to Claim 3, further comprising:
filling a raw material powder into a cavity formed in a die; and
scraping an upper portion of the filled raw material powder,
wherein the green compact is press-formed by selecting a direction opposite to the scraping direction as the predetermined direction.

Claim 7 (previously presented): The method according to Claim 3,
wherein the green compact is pressed-formed with a shape and dimension so that a difference between a shape and dimension of the green compact and a shape and dimension of a desired sintered object is gradually decreased in the predetermined direction.

{W:\20154\0201085us0\00523338.DOC 10/29/2005 12:03:22 PM } 3

Application No.: 10/810,491

Docket No.: 20154/0201085-US0

Claim 8 (previously presented): The method according to Claim 1,
wherein a plurality of the green compacts are radially or concentrically placed on the
sintering plate in plan view.

Claim 9 (previously presented): The method according to Claim 1,
wherein a plurality of the green compacts are placed on the sintering plate in a lattice or
zigzag shape in plan view,
wherein the plurality of green compacts placed on the sintering plate are divided into a
plurality of green compact groups respectively extending from an inner circumferential portion of
the sintering plate toward the outer circumference thereof in plan view, and
wherein the predetermined directions of the green compacts in the same green compact
group are parallel to each other.

Claim 10 (previously presented): An apparatus for aligning a green compact, comprising:
a conveyance mechanism for holding, conveying, and aligning a green compact;
a sintering plate on which the green compact is placed and aligned by the conveyance
mechanism,
wherein the green compact is placed on the sintering plate so that a predetermined direction
of the green compact is oriented substantially toward an outer circumference of the sintering plate in
plan view.

Claim 11 (previously presented): The apparatus for aligning a green compact according to
Claim 10,

{W:\20154\0201085us0\00523338.DOC [REDACTED] } 4

Application No.: 10/810,491

Docket No.: 20154/0201085-USO

wherein a plurality of the green compacts are radially or concentrically placed on the sintering plate in plan view by the conveyance mechanism.

Claim 12 (previously presented): The apparatus for aligning a green compact according to Claim 10,

wherein a plurality of the green compacts are placed on the sintering plate in a lattice or zigzag shape in plan view, wherein the plurality of green compacts placed on the sintering plate are divided into a plurality of green compact groups respectively extending from an inner circumferential portion of the sintering plate toward the outer circumference thereof in plan view, and

wherein the predetermined directions of the green compacts in the same green compact group are parallel to each other.

Claim 13 (previously presented): The apparatus for aligning a green compact according to Claim 10, further comprising:

a sintering plate holder for horizontally holding the sintering plate;

wherein the sintering plate holder has a rotation mechanism for positioning and rotating the sintering plate at each predetermined angle of rotation around its vertical axis.

Claim 14 (previously presented): The method according to claim 1, wherein the sintered object is a throwaway tip.

Claim 15 (previously presented): The method according to claim 3, wherein the sintered object is a throwaway tip.

{W:\20154\0201085us0\005233\18.DOC 11/29/2005 12:17 FAX 2127536237 } 5

Application No.: 10/810,491

Docket No.: 20154/0201085-USO

Claim 16 (previously presented): The method according to Claim 3,
wherein a plurality of the green compacts are radially or concentrically placed on the
sintering plate in plan view.

Claim 17 (previously presented): The method according to Claim 3,
wherein a plurality of the green compacts are placed on the sintering plate in a lattice or
zigzag shape in plan view,
wherein the plurality of green compacts placed on the sintering plate are divided into a
plurality of green compact groups respectively extending from an inner circumferential portion of
the sintering plate toward the outer circumference thereof in plan view, and
wherein the predetermined directions of the green compacts in the same green compact
group are parallel to each other.

{W:\20154\0201085us0\005233\18.DOC 00000000000000000000000000000000 } 6